TRANSPORTATION REGULATED INDUSTRY WORKER SUBSTANCE USE AND WORKPLACE INJURIES

This fact sheet draws lessons from the detailed study of drug and alcohol testing experiences within one selected federally regulated transportation industry. It describes workplace substance use trends and the relationship between workplace substance use and injury. In the company studied, management and labor view substance abuse as a preventable condition. They offer supportive and restorative aid. The drug-free workplace policy gives workers who test positive for the first time the opportunity to participate in treatment in lieu of disciplinary action. A second positive test, however, results in termination.

Drug and alcohol testing in the transportation industry

In 1988, the Department of Transportation (DOT) mandated anti-drug programs for hourly transportation workers. These programs included education, training, testing and sanctions. Testing included pre-employment, for-cause, periodic, random, and follow-up testing for approximately four million workers in safety-sensitive positions. Random drug testing began with a one-year phase-in period beginning in 1990. Random alcohol testing for transport workers was federally mandated beginning in 1995 after a phase-in period beginning mid-1994.

Description of drug and alcohol testing at the study company

At the study company, drug testing results are based on immunoassay screening for drug metabolites in urine. Positive tests are confirmed using gas chromatography-mass spectrometry. The company tests for the five different drugs: cocaine, marijuana, amphetamines, opiates, and phencyclidine (PCP). Drugs such as benzodiazepines, barbituates and club drugs are not included. Alcohol testing results are estimates of blood alcohol levels extrapolated from alcohol levels detected in deep lung air samples. The legal blood alcohol limit as regulated by the Department of Transportation is 40 mg/dl.

Reasons for testing include:

- Random: All safety-sensitive employees are eligible, about 20% of the workforce. A specially designed computer program makes random selections in such a way that every eligible employee working on a particular day will have an equal chance of being chosen. On any day eligible employees report to work they are subject to testing, even if they were tested the day before.
- Post-accident: Before a post-accident test can be administered the supervisor must be able to answer "yes" to both the following questions: 1) did the employee's acts or omissions contribute to the cause or severity of the injury or incident; and 2) is the event Federally reportable or believed to be reportable. Federally reportable events are those that result in medical treatment or lost workdays.
- Reasonable cause: These unannounced tests are performed on workers suspected of drug or alcohol use.
- Follow-up/Return-to-duty: These are unannounced tests of employees who are returning to work after a suspension related to drug or alcohol use.
- Periodic: These are announced tests of current employees, often part of a regularly scheduled physical and unrelated to suspicion about a specific individual.

What can drug and alcohol testing tell us?

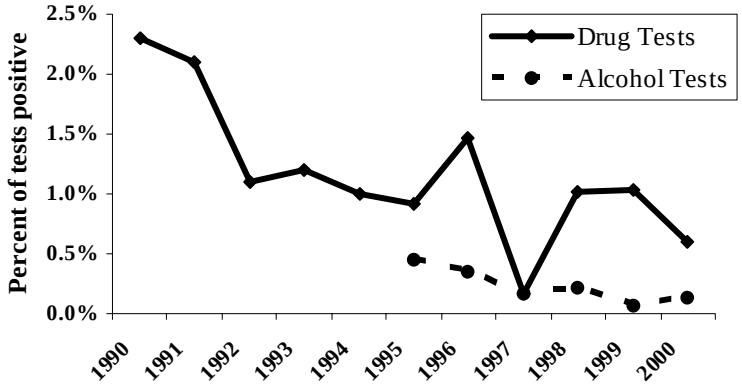
Testing data provide information on current alcohol use and recent or current drug use. Random testing results can be used to estimate the prevalence of recent substance use but only among the 20% of employees at the study company who were categorized as safety-sensitive. Safety-sensitive positions are jobs that, if performed by individuals impaired by alcohol or drug use, could pose safety risks to the public. Examples from the larger transportation workforce include truck and bus drivers, pilots, train engineers, mechanics, railroad track maintenance workers, air traffic controllers, and airport tarmac ground support crew.

What drug and alcohol testing cannot tell us

Testing data cannot be used to measure frequency or pattern of drug and alcohol use. Workers tested for cause (post-accident, reasonable cause, follow-up) are usually selected because there was some suspicion of drug or alcohol use. Therefore, results of for-cause testing cannot be used to estimate the prevalence of substance use among the entire workforce.

According to random drug and alcohol test results, the prevalence of recent drug and current alcohol use is declining at the study company

Results of random testing provide the best indicator of the prevalence of workplace drug and alcohol use among employees in safety-sensitive jobs. At the study company, positive random drug testing rates declined from 2.3% in 1990 to 0.6% in 2000. Positive rates among random alcohol tests showed a similar decline, from 0.5% in 1995 to 0.1% in 2000.



Alcohol and drug users are more likely to be injured on the job

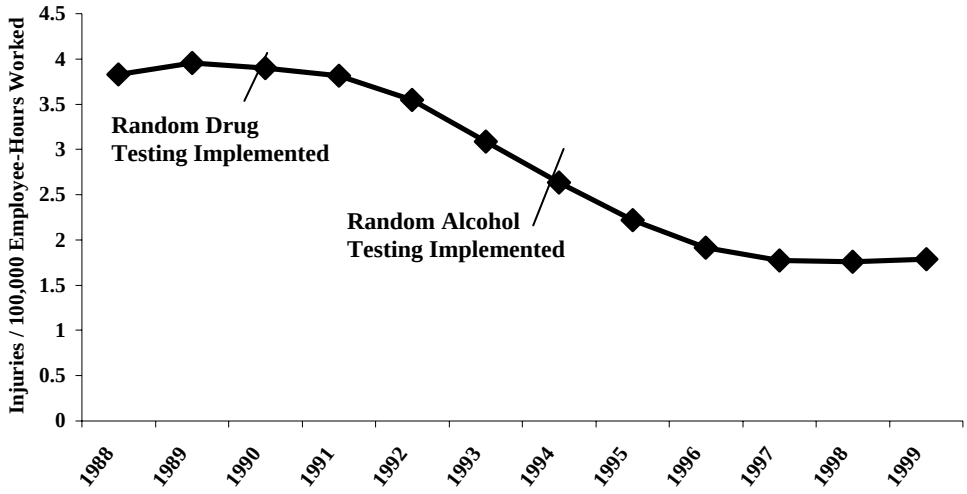
An analysis of the Census of Fatal Occupational Injury found that, among toxicology reports gathered on 57% of the 5,370 occupational fatalities reported by participating states, one-fifth were positive for either alcohol or illicit drugs.

Using data from the study company, Spicer et al. (2002)[1] examined substance use as an independent risk factor for occupational injury. The study further explores the role that problem behaviors play in this relationship. Alcohol and drug abusers were more likely to suffer an occupational injury than non-users. Workers with discipline problems were at even greater risk of injury.

There are two explanations for this finding - not necessarily mutually exclusive. The relationship between workplace problems and occupational injury could be explained as unidentified substance use. Workplace problems, in particular absenteeism, could be a consequence of drug and alcohol impairment. Another explanation is that the relationships observed in this study reflect a general tendency for problem behaviors, including substance use, that put the worker at increased risk of injury.

According to Federal Railroad Administration data, the occupational injury rate among railroad workers was halved in the ten years following the implementation of random drug testing in January 1990. It is unclear, however, from the study of the available data how much testing contributed to the decline, compared to other factors or components of the industry's substance-free workplace or safety programs.

Random drug testing was implemented in the railroad industry in January 1990. In 1989, 4.0 injuries occurred among railroad workers for every 100,000 hours worked. By 1993, that rate had declined to 3.1 per 100,000 hours worked. Random alcohol testing was implemented in 1994. By 1999, just 1.8 injuries occurred for every 100,000 hours worked.



Research Methods

[1] *Spicer RS, Miller TR, Smith GS. Worker Substance Use, Workplace Problems and the Risk of Occupational Injury: A Matched Case-Control Study. Journal of Studies on Alcohol, 64(4):570-578, 2003.* This matched case control study was nested in a cohort of hourly transportation workers. Cases were workers suffering an occupational injury. Five controls were selected per case from the cohort of workers active at the time of the case's injury and matched on job type. Cases and controls were compared based on their history of substance abuse or workplace problems in the year prior to the case's injury. A positive drug or alcohol test result, an alcohol or drug-related Employee Assistance Program visit or an excused alcohol/drug-related absence identified substance abuse. Workplace problems were identified by non-alcohol/drug-related discipline history. Conditional logistic regression modeled the association of substance use with occupational injury, controlling for worker characteristics and problem behaviors.

For more information or assistance in starting a new program, contact:

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